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ABSTRACT

This guide is designed to assist prospective examinees in preparing for the certification/registration examination of the Medical Library Association (MLA). The format of the examination and the types of questions to be found on the examination are discussed, and suggestions for test preparation are provided. Several practice "mini" examinations are included, and test-taking strategies are described. A copy of the MLA's Code for the Certification of Health Sciences Librarians is included, and a 41-item bibliography is provided. (EW)

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# QUALITY IN CONTEXT: A GUIDE TO CERTIFICATION AND REGISTRATION BY THE MEDICAL LIBRARY ASSOCIATION

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# Foreword

The Medical Library Association is committed to the goal of maintaining access to the highest possible level of technical and scientific information in areas served by the health sciences. Therefore, it is engaged in an ongoing program to assess the knowledge, competence, skill, and disposition needed by professionals in health information.

Through an expanded program of Certification and Registration endorsed by the MLA Board of Directors in 1985, the Association gives shape to a comprehensive network of activities and programs to foster and assure competence in a rapidly changing environment.

*Quality in Context* draws attention to a major aspect of the Certification and Registration process: the examinations. Since testing will remain a widely used tactic for assessing achievement in professional education, and a determining factor in the credentialling of health information professionals, coping with examinations is important. *Quality in Context* is designed to assist the prospective examinee in understanding the nature of the MLA examination and the items which are likely to be confronted there. Test-takers who want their test scores to reflect competence and ability, and not the lack of test-taking skills, should find this book especially rewarding.

*Quality in Context* underscores the centrality of competence to professional identity while providing concrete suggestions for preparing for the MLA examinations.

Fred W. Roper, Ph.D., Editor
Editorial Panel for Certification
and Registration Examination

Julie Kuenzel Kwan
1985-1986 Chairman
Certification Committee

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# Introduction

The Medical Library Association's Certification and Registration Program fosters excellence in professional performance. A voluntary program, it evaluates your competence as a medical librarian at entry level and at waypoints along your career path. It helps you assess your professional skill and knowledge, develop career goals, and construct a network of supportive professional acquaintances.

At least as significant is the assurance Certification/Registration gives to your employer—current and future. You are in an increasingly competitive field. The best jobs go to those with the best credentials. Employers know that an MLA certified/registered medical librarian is a professional who has met prescribed educational and practice requirements, has both broad and specialized knowledge of librarianship, has sound work experience, and can handle assignments skillfully and effectively.

Certification/Registration is based initially on educational qualifications, professional experience and references, and successful completion of a written examination. It is maintained through a disciplined program of study, productive scholarship and research, and service to the profession.

## Program Goals

Certification/Registration forms the cornerstone of a comprehensive program of quality assurance and professional development for health sciences librarians. The program fulfills three major goals:

1. Establishing and promoting a standard of competence in health sciences librarianship.
2. Elevating the standards of effectiveness and efficiency in managing biomedical information.
3. Fostering high expectation for formal and continuing education, scholarly productivity, and professional service among health sciences librarians and information specialists.

## Certification Requirements

Certification by MLA is governed by the *Code for the Certification of Health Sciences Librarians*, which was passed by the MLA membership in September 1974, became effective January 1, 1978, and was revised in September 1981. The *Code* is reprinted on page 29 of this booklet. The *Code* specifies three requirements for certification:

1. Graduation from a library school program accredited by the American Library Association (ALA).
2. A passing grade on an examination assessing the entry-level competencies required by health science librarians (this examination to be administered by the Association).
3. Two years (or the equivalent) of post-library degree experience as a health sciences librarian at the professional level within the previous ten years.

A Portfolio of Professional Experience also is required for Certification. The Portfolio helps you assess your skills and career goals.

## Registration Requirements

Unlike Certification, Registration *does not* require a degree from an ALA-accredited library school. The following are the registration requirements:

1. A graduate degree in a field directly related to library or information science (e.g., a non-ALA master's of library science or a master's of computer science).
2. A passing grade on an examination assessing the entry-level competencies required by health science librarians (this examination to be administered by the Association).
3. Two years (or the equivalent) of post graduate experience as a health sciences librarian at the professional level within the previous ten years.
4. A Portfolio of Professional Experience.

## The Professional Connection

Certification/Registration is one outreach of the Medical Library Association. Participation in the program is not limited to Association members. However, the program goals are fostered and promoted in a special way by your participation in the Association.

MLA is the primary professional group for health sciences librarians and information specialists. As the dominant voice of the profession, it has led the way in developing standards for the practice of medical librarianship. It also is the public voice of health sciences librarians on issues and policy, and the foremost provider of quality educational programs, services, and conferences. MLA members are kept abreast of the latest developments in their profession through the Association's publications. Members stay in touch with colleagues through regional MLA Chapters and stay current in fields of special interest through MLA Sections and Roundtables.

In all of its programs, MLA targets leadership as the goal of the professional. And since leadership can begin with Certification/Registration, membership in the Association is a natural complement to your participation in the program. For additional information on Association membership, you may contact:

Membership Services
Medical Library Association
919 North Michigan Avenue
Chicago, Illinois 60611
312/266-2456

# Chapter 1:
# A Matter of Competence

## What Is Competence?

Competent performance marks the professional in any field. It means more than the completion of a degree requirement, or a title, or a level of employment. Competence means striving daily to expand theoretical knowledge and to incorporate it into practice.

As a professional, your commitment to competence involves lifelong growth and development. The foundations of competence are established in educational preparation and will continue throughout your practice, when competence is tested constantly by performance.

Your competence is unique because your life and learning are unique. For the purposes of Certification/Registration, we assume that competence combines what you know and what you can do as a health sciences librarian at a specific time and place.

Developing and maintaining competence is a complex enterprise. Your learning needs and habits, and thus your competence, are affected by work setting, age, career changes, new technology, and emerging work tasks and problems. Thus, your competence should be expanding continuously in relation to the tasks you face.

## Who Assesses Competence?

The MLA Certification Committee is responsible for monitoring the MLA program. Its seven members serve as volunteer representatives of the profession for time-limited, overlapping terms to maintain continuity. A breadth of knowledge, experience, and perspectives are represented by their expertise in basic areas of medical library practice and by their varied work settings, educational backgrounds, and geographical regions (including Canada).

The Certification Committee reviews and recommends guidelines governing Certification/Registration in compliance with the *Code for the Certification of Health Sciences Librarians*. It recommends policy initiatives on competence and credentialling of health sciences librarians to the MLA Board of Directors.

The Certification Committee monitors test development, content assessment, information accuracy and currency, the consideration of individual grievances, and the assurance of fair and equitable test administration. It also scrutinizes the complex testing and evaluation process and works closely with the University of Illinois at Chicago and other specialists for validation and score analysis.

The Certification/Registration examination is constructed by an Editorial Panel named by the MLA Board of Directors. The Panel reviews test items submitted by qualified medical librarians and information specialists, maintains an active file of approved questions, plans each examination, and validates individual examination scores annually.

## How Competence Is Assessed?

Materials developed for MLA Certification/Registration interweave four "indicators" of competence, based on research and on observation of medical library practice:

1. Level of mastery of the knowledge that supports the practice of librarianship.
2. Understanding of the overall process of librarianship and the specific tasks required to fulfill responsibilities in the workplace.
3. Level of experience of the medical librarian and the librarian's individual characteristics and attitudes.
4. Observable behavior, that is, the task performance exhibited when the librarian interacts with other librarians, patients, students, members of the health care team, and the public.

The materials you submit assist in measuring your performance according to these indicators (transcripts of graduate study, rating scales and references from professional colleagues, documentation of experience). Of course, your score on the formal Certification/Registration examination is critical.

You, the applicant, are a full partner at each step in the Certification/Registration process. Your interest supports the highest professional standards and your dedication to competence brings the latest information and skill to patient care, education, and research.

# Chapter 2: Portfolio of Professional Experience

Who am I? Where am I going in my career? Am I keeping pace with others in my field?

Almost all professionals ask themselves these questions at pivotal points in their careers, and health sciences librarians are no exception. Today's environment demands self directed, thoughtful, technically expert, and up-to-date professionals.

Certification/Registration promises to be a career compass of the '80s for hundreds of medical librarians.

As you know, the process includes a number of steps. You may be tempted to think that Certification/Registration is based on the written examinations alone. That would be a mistake. Really, the examination is but one component of a process which has at its heart a deep sharing of professional values, knowledge, and skills, illustrated by the Portfolio of Professional Experience.

The Portfolio is your record of study, work experience, and professional achievement. Following your application for Certification or Registration, you will be asked to assemble a number of documents verifying aspects of your performance as a librarian. You begin your Portfolio with your first application, and maintain it throughout your career in health sciences librarianship.

The Portfolio will help you get a balanced picture of the knowledge and skill the profession considers important and will give you an opportunity to test your perceptions of yourself against those of your respected colleagues. It will give you another perspective on your strengths and weaknesses.

The Portfolio includes a number of documents. You prepare some; others come from your employer and the schools you have attended. Still others are completed by your colleagues. Together you review your performance as a member of the profession, note areas for special attention, and discuss opportunities for future growth. Now let's look at each part of the Portfolio.

## Personal Data Form

Begin with what you know best: yourself. As you prepare for Certification/Registration, you will want to summarize all that you have accomplished up to this point as a medical librarian. The Personal Data Form is a resume of sorts, which sketches your record of formal preparation, practical experience, and professional achievements in the field.

You should include all formal and continuing education that has contributed to your development as a librarian. Work experience—both paid and unpaid—should be listed. Do not overlook field work assignments and internships. And, be sure to cite any contributions you have made to the profession through published articles, committee memberships, and service activities. This is your opportunity to present a clear picture of yourself as a competent and responsible participant in the rapidly changing field of health sciences librarianship.

## Transcripts of Formal Education

Authoritative documentation of academic preparation backs up your Personal Data Form. To be considered for Certification or Registration, you must have completed at least a master's degree in a discipline directly related to the management of information. For Registration, a wide range of educational experiences is acknowledged as appropriate to the growing field of biomedical information management. However, if you seek Certification, the *Code for the Certification of Health Sciences Librarians* specifies that your degree must be in library or information science and must have been granted by an institution accredited by the American Library Association (ALA). (A current listing of these schools is available from ALA or from MLA Headquarters.) In either case you should provide transcripts of graduate degrees completed. You should request copies of your transcripts promptly, since they often are delayed in mailing. Do not have them forwarded to MLA. Instead, submit them with your completed Portfolio.

## Documentation of Professional Experience

You must have at least two years of full-time, or the equivalent in part-time, paid post-master's work experience in health sciences librarianship for *full* Certification/Registration. Provisional Certification/Registration, good for five years, may be granted to applicants who satisfy all requirements except the documented work experience. Provisional Certification/Registration can be upgraded to full Certification/Registration when the two-year requirement is met.

## Selected References

Professional reference forms are of two sorts. Form I asks for an appraisal of your performance in areas typical of professional practice in *any* field. For example, the form asks about your relationships with other employees and with users of library services, as well as your work habits, initiative, and ability to use time effectively. Form II corresponds directly to the examination objectives. It asks your reference to judge, from his/her perspective, your level of performance in several specific areas of knowledge and skill.

You must obtain three professional references and submit these as part of your Portfolio. One of these *must* be from your present supervisor. The other two should be from professional colleagues who are currently working as information professionals and are familiar with your work.

Of course, if you've taken advantage of the "mentorship" option (see page 13) your mentor would be an excellent choice as a reference.

Select only those persons who are willing to respond and will return the reference forms to you so that you can return all three sets with your Portfolio. References are a sensitive matter. You should approach persons thoughtfully and carefully so that they understand the importance of their fair and supportive estimate of your work. If any of your references cannot answer most of the questions on the forms, you should seek an evaluation from another person.

## Self-Assessment

Valuable as references can be on their own, their real significance often becomes clear only when they are placed along side your appraisal of *yourself*. Be candid and honest with yourself. Don't "go easy," but don't give yourself all low marks as you complete your set of appraisal forms. Now compare yours with those of the references you selected. Are they similar? What differences appear? Backed up with information from references, you may be able to zero in on potential roadblocks to success on the written examination . . . and to career growth. Now you are in a better position to plan your study for the examination.

This is a process you'll repeat over and over throughout your career. First pinpoint your current abilities. Check them against the judgment of persons whose opinions you value. Then plot out the most direct route to enhancing professional knowledge and skill and to arriving at your career goals.

## Toward Continuing Competence

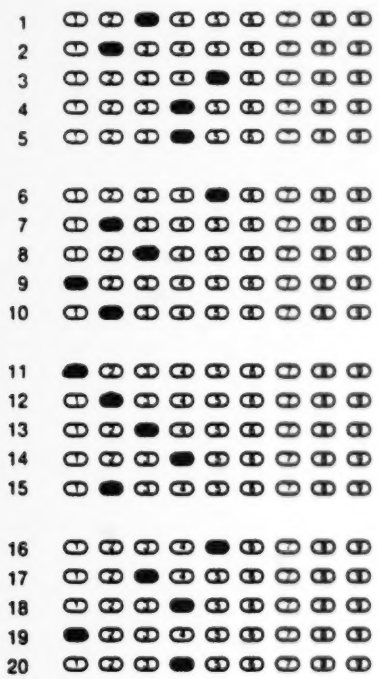
Once you submit your Portfolio to MLA Headquarters, it will be processed, recorded, and verified by program staff. The Portfolio will then be returned to you. You should maintain it as a personal record of your ongoing study, development, and accomplishments in medical librarianship. Add to it certificates of completion from continuing education courses, copies or off-prints of articles you write, and reports on research completed. In this way, you will be compiling the documents you will need when you apply for Recertification/Reregistration.

What emerges in the Portfolio of Professional Experience is a roadmap of professional development. Supplemented by ongoing self and peer assessments, the Portfolio focuses across a broad range of knowledge areas and targets patterns for personal and professional growth. The Portfolio is a vehicle for you not only as you enter the field. It also will serve you in building, directing, and molding your career.

# Chapter 3:
# The Certification/
# Registration Examination

## What Is the Examination Like?

The Certification/Registration Examination is written. The examination is in two parts: the General Examination and the Area of Concentration Examination. You will be given a test booklet and a separate computer-ready answer sheet. Remember to bring at least two #2 pencils to the examination. Each test question follows the typical multiple choice format. You must enter your answer (1, 2, 3, 4, or 5) on the answer sheet as the example below illustrates.



The General Examination has over 100 questions; the Area of Concentration Examinations are somewhat shorter.

The examination is straight-forward: care has been taken to eliminate tricky or ambiguous questions. The test rewards you fairly for what you know; it does *not* aim to fail you.

## What Does the Examination Include?

The examination explores four dimensions of professional performance: knowledge or content, cognitive ability, strategies of analysis and problem solving, and practical relevance to the workplace. Since seeing and understanding the elements of the examination may help you anticipate what the examination demands, you may want to refer to the diagram below as you read.

**Professional Practice**

| | ABILITIES | | | | |
|---|---|---|---|---|---|
| C O N T E N T | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

The examination is broad and eclectic: it emphasizes the knowledge that health sciences librarians ordinarily use in their work and the issues, thought processes, judgments, and tasks that librarians face every day. It tests only material relevant to health sciences librarianship, *not* all that you might have learned in a graduate library program.

*The General Examination* covers a broad spectrum of material. Medical librarianship is a multi-faceted profession encompassing diverse roles, tasks, organizational settings, technologies, and service populations. Librarians themselves represent a diversity of personal styles, values, and theoretical orientations.

Regardless of this diversity, you must remember that health sciences librarianship deals with the collection, organization, access, dissemination, and preservation of biomedical information. No matter what your particular assignment, there is a core of knowledge that unifies the practice of health sciences librarianship. You should be prepared to share your knowledge of the following.

### Overview of Examination Content

*Health Care Environment*

- Current and emerging conditions, trends, and issues in patient care, research, and education.
- Terms and concepts referred to in the popular press and in journals commonly consulted by health sciences librarians.
- Health care professionals who are licensed and/or credentialled, programs and institutions which are accredited.
- Difference between licensure, credentialling, and accreditation.



9

- Key institutions which license, certify, or accredit.
- Role of continuing education in these processes.
- Major health care professions and their role in the delivery of health care.
- Educational requirements of each of the major health care professionals.
- Major professional organizations to which health care professionals belong.
- Major changes in the role of the National Library of Medicine throughout its history.
- National Library of Medicine's collection development policy.
- Key features of the Regional Medical Library Program.
- Major legislation which has defined the role and activities of the National Library of Medicine.
- Role of the National Library of Medicine in the collection, organization, and dissemination of biomedical literature.
- Role of the National Library of Medicine in current research grant support.
- Purposes, programs, activities, or publications of the Medical Library Association.

*Public Sevices*

- Types of information needs of physicians, dentists, pharmacists, nurses, allied health personnel, and other health professionals.
- Types of information needs of students in the health care professions.
- Typical information needs or requests of patients or other non-professionals.
- Types of information resources, including monographs, journal articles, dictionaries, abstracting and indexing services, directories, patents, dissertations, etc.
- Formats and characteristics of the various types of information resources.
- Use of the general types of information resources in the transmission of health sciences.
- Appropriate reference works or online sources for specific information needs or problems.
- Scope, coverage, content, arrangement, and access points of specific reference works or online sources of information.
- Appropriate information services for anticipated or actual information needs of users.
- Service possibilities or service goals and objectives.
- Use, content, scope, coverage, and access points of print and non-print information sources derived from the National Library of Medicine's MEDLARS system.
- Selection of appropriate citations from an *Index Medicus* or MEDLINE search for specific information needs, based on content, publication type, audience, language, etc.

*Technical Services*

- Purpose of a collection development policy.
- Key elements of a collection development policy, such as definitions of terms, description of user population, scope and coverage by subject, guidelines regarding format and type of material, date of publication, language, multiple copies, replacements, retention, and withdrawals.
- Application of selection criteria such as subject level, audience level, language, price, publisher, year, scope, availability elsewhere, indexing policy, etc.
- Application of selection criteria in different types of libraries.
- Appropriate online and print sources for bibliographic verification.
- Basic online and print sources of cataloging copy information for use in descriptive cataloging or classification of monographs and serials.
- Use of sources of cataloging copy.
- Key elements in NLM's application of the NLM Classification System for classification of works in uncomplicated subjects.
- Choice of LC or NLM classification number for works in uncomplicated subjects.
- Choice of frequently used NLM form numbers.
- Principles of MeSH vocabulary as applied by NLM for selection of appropriate subject headings and subheadings.

*Area of Concentration Examination* acknowledges individual differences in interest, preparation, and work experience. This part of the examination deals in greater depth and specificity with knowledge and skill required in a given area. You will choose one of three options: Public Services, Technical Services, or Hospital Library Practice.

You should be prepared to demonstrate your in-depth knowledge in one of these areas.

**Abilities**

Questions in both the General Examination and the Area of Concentration Examination check your ability to think at several levels of complexity. You will be tested in different knowledge areas with questions ranging from the reasonably simple to the more complex. For example, a question which requires you to remember a particular fact is less complex than one which demands the synthesis of several facts to identify the correct response.

The intersection of two dimensions — content and cognitive ability — represents the basic structure of the examination. The number of questions in each content/ability "intersection" remains fairly constant for every test adminstration although the particular questions vary.

**Professional Context**

The examination questions are practical. They refer to situations that are typically encountered by medical librarians in any work setting. Examples might be drawn from hospital or academic libraries. References may be made to medical education, research, and patient care. This dimension of the professional's life frames the entire examination.

To summarize, the examination presents a fair mixture of the essential content and cognitive ability expected for truly *professional* performance. The result is a broad and valid sample of knowledge and skill in contexts likely to be encountered.

**Expectations: Stated Objectives**

The three dimensions of professional performance measured by the examination are expressed in objectives or statements of expectations for health sciences librarians. The objective clarifies how the content will be used. It states the behavior you will use to demonstrate the knowledge or skill you have acquired. Action verbs are typically used to describe this behavior because they are precise and unambiguous. And, they reflect the complexity of thinking involved in demonstrating knowledge and skill on the examination.

Generally, lower levels of complexity require you to recall or recognize facts. Intermediate levels require you to apply information in solving problems. Higher levels expect you to analzye or synthesize information or to evaluate its worth. The following are examples of action verbs describing behavior at different levels:

| *Less Complex* | *More Complex* | *Most Complex* |
|---|---|---|
| choose | compare | analyze |
| define | differentiate | compose |
| describe | distinguish | diagnose |
| identify | find | defend |
| list | apply | propose |
| mark | | solve |
| match | | evaluate |
| name | | |
| select | | |
| state | | |

The Certification/Registration Examination refers directly to a set of objectives that describe behavior expected of an entry-level librarian with two years of experience.

For the General Examination, the objectives are as follows:

*Health Care Environment*

- Identify and describe legal, ethical, economic, and legislative issues that impact the health care industry in the United States and Canada.
- Identify the major health care professionals, their educational requirements, their role in the delivery of health care, and their professional organizations.
- Describe credentialling, licensing, or accreditation of professionals, programs, or institutions.
- Describe the past and present role of the National Library of Medicine (NLM) in collecting, organizing, and disseminating health sciences information; in promoting interlibrary cooperation among health sciences libraries; and in current research grant support.
- Describe the purposes, programs, activities, and publications of the Medical Library Association.

*Public Services*

- Identify basic information needs of health sciences professionals and the health sciences information needs of patients and other non-professionals.
- Distinguish between the types of health sciences information resources according to their uses, functions, formats, or characteristics.
- Select specific reference works or online sources of major importance in the health sciences for specific information needs or problems.
- Select appropriate services based on user information needs.
- Identify the characteristics of print and non-print sources derived from the MEDLARS system.
- Evaluate results of an information search and select the most appropriate items for specific information needs.
- Apply basic concepts for searching MEDLINE, CATLINE, and SERLINE.

*Technical Services*

- Describe the purpose and the elements of a collection development policy.
- Apply selection criteria as outlined in a collection development policy.
- Select appropriate online and print sources for bibliographic verification.
- Select appropriate cataloging tools and both online and print sources of bibliographic information for descriptive cataloging or classification information.
- Choose appropriate classification numbers from the NLM and LC classification schedules based on current cataloging practice.
- Choose appropriate subject headings and subheadings based on an understanding of MeSH vocabulary and the principles of application based on NLM's cataloging practices and policies.

The Area of Concentration Examinations have their own sets of objectives, more complex and more detailed than those for the General Examination.

## Who Develops the Test?

The development and construction of both the General and the Area of Concentration Examinations is a complicated, time-consuming, and expensive process. The tests are the result of the conscientious efforts of many medical librarians, plus the knowledge, skill, and experience of psychometricians and educators. Their partnership blends special knowledge of what matters in health sciences librarianship with expertise in test design and research.

The task of defining and structuring the test rests with the Certification Committee. Its members determine what areas of content, what mixture of complexity, and what work settings and what proportions of each should comprise the test. The Certification Committee members continuously monitor the exam specifications for timeliness and relevance to this rapidly changing field. Over the years, they have been assisted by consultants and specialists from various disciplines and backgrounds. They scrutinize test results, research test administration, and study in-depth all test components. Matters of language clarity and accessibility of the questions are reviewed meticulously.

The overall structure of the test remains fairly stable. However, over time and after serious consideration, the proportion of questions allocated to knowledge areas changes, and new content areas are added. The particular questions in any given test vary from administration to administration. A portion of the questions are retained to allow for statistical comparisons among examinations and to ensure consistency.

The examination is in a continuous process of renewal. Just as the practice and professional issues it reflects change over time, so does the test. The development of questions is a grass-roots enterprise that benefits from the widest possible soliciation of item-writers (people who write test questions). Chapters and Sections of the Medical Library Association are encouraged to contribute to the process, and items are actively solicited from members representing a range of ethnic and cultural backgrounds and a variety of library settings.

Potential item-writers are instructed on how to write questions that deal with specific content areas. On occasion, specialists conduct item-writing workshops where Certification Committee members and other medical librarians are trained in question construction.

Questions are revised, edited, and prepared for publication by the Editorial Panel for the Certification and Registration Examination. The Panel appraises each question in terms of its significance (important, adequate, inappropriate), its technical quality (acceptable, needs minor, needs major revision), its placement in terms of content categories, and its level of complexity. Further, the Panel may "pilot-test" questions with a competent "control" population in order to avoid ambiguous or unreliable items.

After each test administration, every item is analyzed statistically in terms of "how it worked." If there are questions that large numbers of high-scoring candidates missed, these are flagged for reconsideration by the Editorial Panel and by the Certification Committee. A faulty test question will be deleted from the examination and scores adjusted so that no one is penalized.

# Chapter 4:
# Just for Practice, a Mini-Exam

You've read far enough now to have an orientation to the general components of Certification/Registration. The examination is the component we will emphasize from here on. Before dealing with the exam in greater detail, let's see how well you do with some sample questions. The 20 questions that follow are representative of the actual test content, difficulty level, and question formats. Please go through them carefully and record your answers in the box on page 31. When you have completed the mini-exam, check your answers against those on page 5. If you have answered all the questions correctly, you may decide that this is as much reading as you will need to do in this guide!

***Directions:*** *Each of the questions below is followed by four or five suggested answers. Select the* ***one*** *that is best in each case and then blacken the corresponding space on the answer sheet at the end of this section.*

(1) Which of the following elements would **not** be found in a collection development policy?
1. Criteria for determining whether or not to purchase duplicate texts
2. Description of the user population served by the library
3. Criteria for evaluating vendors used for making purchases
4. A statement on the currency of the collection
5. A list of selection aids used by the library

(2) You are a librarian in a large, research hospital. Your collection policy states in part: "The Medical Library collects current monographs in oncology at the comprehensive level . . . Foreign language items are rarely added to the collection." You are currently looking at items in the **National Library of Medicine's Current Catalog Proof Sheets** that will be of use to the Cancer Research Unit in your institution. Applying the criteria listed above, which of the following titles would you choose **first** for your collection?

1. Boenisch, Karl B. F. Krebsursache und stomare Fehlordnungen naturfremder Herkunft (lieteortope)// K.B.F. Boenisch. — Herzogsdorf (Austria) : Boenisch, C1972 — 16 leaves, Limited cataloging.
1. Neoplasms - etiology 1. Title
02NLM: AA6243 Cit. No. 8310472

2. Oncodevelopmental markers : biologic, diagnostic, and monitoring aspects / edited by William H. Fishman. —New York : Academic Press, 1983. — xviii, 432 p. : ill.
ISBN 0-12-257701-9
1. Genetic Marker 2. Neoplasms - diagnosis 3. Oncogenes 1. Fishman, William H.
LC: 83-3826
02NLM: QZ 241 O58 1983
Cit. No. 8301840 (rev.CIP.)

3. Fundamentals of cancer management — 1- — New York : Dekker, c1983- — v.:ill. Editors: Norman M. Bleechen, Eli Glatstein.
ISSN 0739-7364 — Fundamentals of cancer management
1. Neoplasms - therapy - periodicals I. Bleechen, Norman M. 1930- II.Glatstein, Eli
02NLM: WI FU5395
Cit. No. 8217738 (rev. CIP.)

4. The Macrobiotic approach to cancer : towards preventing & controlling cancer with diet and lifestyle / [edited by] Michio Kushi and the East West Foundation. — Wayne, N.J. : Avery Pub. Group, c1982. — 126 p. : ill Limited cataloging.
ISBN 0-89529-209-2 (pbk).
1.Holistic Health - popular works 2.Neoplasms - diet therapy - popular works 3. Neoplasms - prevention & control - popular works 1. Kushi, Michio.
LC: 82-235726
02NLM: CC6668
Cit. No. 8303714 (rev.)

5. Cowdry,Edmund Vincent, 1888- Etiology and prevention of cancer in man. New York, Appleton-Century-Crofts (c1968) xxvi, 420 p. illus.
1. Neoplasms - prevention & control 2. Neoplasms - etiology I. Title
LC: 68-10848
04NLM,01HMS: QZ 202 C874 c1968 Cit. No.01o3112 (rev.)

(3) A physician had asked you for assistance in locating articles and monographs describing the discovery and early use of ether as an anesthetic. In preparing a lecture to his medical students, he wished to see both current and primary sources reflecting the controversy surrounding the discovery of ether. He has now examined the books and articles on ether which you obtained for him several weeks ago. One article was of particular interest, and he asks if you can locate further articles which comment on it. Which of the following would be *most* useful?

1. *Bibliography of the History of Medicine*
2. *Current Work in the History of Medicine*
3. *Index-Catalogue of the Library of the Surgeon-General's Office*
4. *Index Medicus*
5. *Science Citation Index*

(4) In consultation with the head of a cancer research team, you discuss ways of keeping up-to-date with the latest developments reported in the literature. Which one of the following would provide the *most* efficient means for doing so?

1. Circulation of the library's monthly acquisition list with appropriate materials marked and routing of photocopies of contents pages of selected journals
2. Monthly search of *Bibliography of Medical Reviews* and regular subject searches in *CATLINE*
3. Regular search of *Current Catalog Proof Sheets* and scanning upon receipt of journals selected on the basis of a citation analysis of his initial literature search on lymphoma treatment.
4. Regular updates from selected databases and regular scanning of *Current Contents*
5. Regular updates from selected databases and scanning of all cancer-related journals upon receipt

(5) In preparing a library budget for the first time, a number of items must be considered. Which of the following pieces of information is the *most* important to determine before the budget can be completed?

1. Anticipated increases in journal subscription costs
2. How much money the library can expect to have next year.
3. If program budgets are more effective than line item budgets
4. Institutional requirements for submitting budgets
5. Whether the library is a state or private institution

(6) Listed below are sources which might be used to evaluate the collection in a small hospital library:

A. *Cumulated Index to Nursing and Allied Health Literature*
B. *Hospital Literature Index*
C. "A Library for Internists"
D. *Medical Books and Serials in Print*
E. "Selected List of Books and Journals for the Small Medical Library" (the Brandon list)

Which of the following combinations represents the *most useful* tools?

1. A, C
2. A, D
3. B, D
4. B, E
5. C, E

(7) Subject headings are to be assigned to a book in which the following subjects are discussed equally:

. . Addison's disease
. . Adrenal gland neoplasms
. . Congenital adrenal hyperplasia
. . Deficiency of adrenal cortex hormones
. . Hypercorticism

The *best MeSH* subject heading would be

1. ADRENAL GLANDS
2. ADRENAL GLAND DISEASES
3. ADRENAL GLAND HYPERFUNCTION
4. ADRENAL GLAND HYPOFUNCTION
5. ADRENAL GLAND NEOPLASMS

(8) You are the Circulation Librarian in a medical school library with a annual circulation of 65,000. The loan period for books is two weeks, with two renewals permitted. The book budget of the library is extremely limited. You were asked by the Director to recommend ways in which the circulation records could be used for both collection development and to improve services to users.

In order to respond to the Director's request, you *first* need to:

1. interview other area circulation librarians regarding types of statistics kept by them
2. survey the library literature on circulation statistics
3. review the statistics collected for each circulation procedure
4. consult the library staff outside the Circulation Department for their suggestions
5. solicit users' recommendations for improvement of services

(9) You would like to purchase a monograph for your collection that you believe was published five years ago, but you do not know whether the item is still available for purchase. Which of the following is the *best* source to verify this information?

1. *Medical Books and Serials In Print*
2. CATLINE
3. *Cumulative Book Index*
4. *National Library of Medicine Current Catalog*
5. *American Book Publishing Record*

(10) Mau, G. Toxoplasmainfektion und schwangerschaft. *Dtsch. Arztebl.* 75:77-80, 1978

Which one of the following sources will provide an English abstract of this article?

1. *Cumulative Index to Nursing and Allied Health Literature*
2. *Excerpta Medica*
3. *Index Medicus*
4. *Science Citation Index*
5. *Translations Register — Index*

(11) Which one of the following sources will definitely *not* provide information as to when and where the next meeting of the American Burn Association will be held?

1. *Conference Papers Index*
2. *International Congress Calendar*
3. *JAMA: Journal of the American Medical Association*
4. *Scientific Meetings*
5. *World Meetings: United States and Canada*

(12) *MeSH Annotated Alphabetic List* contains the following entry:

NERVE COMPRESSION SYNDROMES
C10.772.491+
coord 1M with specific nerve (1M); 'cauda equina syndrome : coord 1M with CAUDA EQUINA (1M)
73(72); was NERVE COMPRESSION 1970-71 (Prov.)
use NERVE COMPRESSION SYNDROMES to search NERVE COMPRESSION 1970-71 (as Prov)
X ENTRAPMENT NEUROPATHY
XR COMPARTMENT SYNDROMES

Based on this entry, which one of the following statements is *incorrect?*

1. More specific terms related to NERVE COMPRESSION SYNDROMES are listed in *MeSH Tree Structures*
2. NERVE COMPRESSION SYNDROMES became a major descriptor in 1972
3. NERVE COMPRESSION SYNDROMES can be coordinated with the specific nerve(s) involved
4. There is a "see" reference from ENTRAPMENT NEUROPATHY to NERVE COMPRESSION SYNDROMES

5. When searching MEDLINE back to 1970, NERVE COMPRESSION SYNDROMES can be used even though the term in 1970 was NERVE COMPRESSION

(13) A library has just received the proceedings of the *4th International Congress of Radiology*. The title of the volume is: "The Radiologic Diagnosis of Diseases in Infants and Children." This monograph is to be classified according to current National Library of Medicine practice.

Which of the following *MeSH* subject headings *best* describes the monograph listed?

1. PEDIATRICS—CONGRESSES
2. RADIOLOGY—CONGRESSES
3. RADIOGRAPHY—IN INFANCY & CHILDHOOD—CONGRESSES
4. 1 and 2
5. 1, 2 and 3

(14) You are cataloging a book for your collection entitled *The Diagnosis and Therapy of Heart Disease*, which was published this year. You know that cataloging copy is probably available for this title. Which of the following is the *best* source to determine the classification number that NLM would assign to this work?

1. Cataloging in Publication
2. *National Union Catalog*
3. OCLC
4. CATLINE

(15) When cataloging the book *Treating Black Widow Spider Bites*, you note the following entries in *MeSH Annotated Alphabetic List:*

BITES AND STINGS
C21.elu 127• C21.8oo 133•

snake bites — SNAKE BITES; spider bites — ARACHNIDISM; tick bites — TICKS (IM) • BITES AND STINGS (IM) (not TICK TOXICOSES unless paralysis or toxicosis results; coord IM with biter (IM); INSECT BITES AND STINGS is also available; DF: BITES

\ STINGS
NC BITES, HUMAN
NR ALLERGENS

BITES, HUMAN
C21.8oo 133.311
the human is biting, not being bitten; don't forget to check tag HUMAN
•2•
see under BITES AND STINGS

According to NLM's policies, you assign the correct subject heading:

1. ALLERGIES
2. ARACHNIDISM
3. BITES AND STINGS
4. BITES, HUMAN
5. INSECT BITES AND STINGS

(16) Which of the following is most often associated with support of "right to life?"

1. American Bar Association
2. B'nai Brith
3. American Civil Liberties Union
4. American Medical Association
5. Moral Majority

(17) A resident wants to review the board certification requirements in family practice. Which of the following is *most* likely to answer this question?

1. *AAMC Directory of American Medical Education*
2. *AHA Guide to the Health Care Field*
3. *Directory of Medical Specialists*
4. *Physician Distribution and Medical Licensure in the U.S.*
5. *Handbook for Foreign Medical Graduates*

(18) You have received a request for information concerning the care of an elderly patient with pneumonia. Which of the following user groups would *most* likely use this information?

1. X-ray technologists
2. Ward secretaries
3. Volunteers
4. Nurses

(19) Which of the following is *not* a program of the Medical Library Association?

1. Accreditation of graduate health sciences librarianship programs.
2. Provision of continuing education courses for health sciences librarians.
3. Approval of workshops in health sciences librarianship for continuing education credit.
4. Certification of health sciences librarians.

(20) Your library has just received the work titled *Gynecologic Cancer: Statistical and Epidemiological Information*. You are to classify this monograph according to NLM's policies. You choose the classification number:

1. QZ 200
2. WA 105
3. WA 900
4. WP 16
5. WP 145

*(Please refer to NLM Classification and LC Classification Schedules*)*

***Answers:*** *Correct answers are given on the sample answer sheet found on page 5. Check your answers and decide whether you need to read further. The next chapters of this guide are devoted to improving your readiness to take the actual examination.*

* Appropriate classification schedules will be supplied for the examination.

# Chapter 5:
# Looking Ahead

## How Should I Prepare?

Do I know enough? Do I know enough about enough? These nagging questions worry every candidate before an examination. The content of an examination *is* important. It is the part of any examination that is the most obvious. But, you should not forget that other aspects of the testing situation are equally important.

For example, familiarity with the test format and the types of items you are likely to encounter will help you know what to expect. Imagining yourself in the testing situation and thinking through test-taking techniques described in this guide will reduce your anxiety. In other words, you can work at developing an active versus a passive approach to the examination. Research has shown that active orientation is the major difference between high and low scorers. Furthermore, research on test taking suggests that "test-wiseness" is more a function of general understanding, comprehension, and reasoning ability than knowledge of the subject matter! Our aim in this guide is to make you a little more "test-wise."

Many techniques, besides revising basic knowledge, will help your test-wiseness. For example, know the type of test this is: the MLA Certification/Registration Examination is an achievement test—it deals with things you have learned in the past. Know about the correction formula of the test: this test has no penalty for guessing.

You also can improve your score in other ways: over-learning reduces anxiety; consulting friends and others about their experience with the examination may reduce your fear of the unknown. Underlining key words as you read the questions, reading directions slowly and carefully, pacing yourself, and following the techniques presented in Chapter 7 will increase your test-wiseness.

Preparation should begin with content. A major part of the exam's content is in its vocabulary. It is very important for you to be familiar with the terminology of health sciences librarianship, even if you do not use the words regularly. As a start, let's look at these words. Perhaps they will show you what you know and what you will want to review.

bibliographic databases
descriptive cataloging
cataloging copy
collection development policy
access point
Boolean operations
cross reference
information needs

Did those words begin to jog your memory? Let's try others:

indexing annotations
cataloguer's annotations
*NLM Proof Sheets*
*NLM Audiovisuals Catalog*
MEDLARS
unit record
scope note
scope and coverage
transmission of information

Here are more words and terms . . .

MeSH Annotated Alphabetic List
"Black and White MeSH"
MeSH Tree Structures
NLM Classification
LC Classification
NLM Technical Bulletin
SERLINE
CATLINE
Index Medicus

And what about these?

licensure
credentials
accreditation
house staff
eponymous dictionaries

Here are some shorthand terms of importance . . .

| | |
|---|---|
| AACR2 | CIP |
| LCSH | CSB |
| ISBD | OCLC |
| CBI | GPEP |

Were you familiar with most of the terms? We hope so. The definitions might offer you a way to think about a concept. Some of the terms are the specialized language of medical librarianship. Refer to textbooks in library and information science or other professional reference books.

## Materials for Review

Every profession has a body of theoretical literature that provides the foundation for practice. You will want to have a working knowledge of this. Most medical librarians would consider the following books essential for an overview of the general concepts of the profession and the environment of the health sciences*:

*Handbook of Medical Library Practice*

*Hospital Library Management*

*Introduction to Reference Sources in the Health Sciences*

Then, you will want to review the contents of the basic working tools currently in use in health sciences libraries . . . and don't neglect the introductions! They contain useful information for the librarian. Examples include:

*Anglo-American Cataloguing Rules. Second Edition*

*NLM Classification*

*MeSH - Annotated Alphabetic List. Tree Structure List. and Permuted*

*Index Medicus*

*NLM Online Services Reference Manual*

*Cumulative Index to Nursing and Allied Health Literature*

Published sources of information on current practice and issues may also be helpful. They include publications of the Medical Library Association, the Library of Congress, and the National Library of Medicine. Review the following with care:

*Cataloging Service Bulletin*

*NLM News*

*Bulletin of the Medical Library Association*

*Library Journal*

*American Libraries*

Other publications in your special field of interest

## Opportunities for Study

Each of us studies in a different way. If you prefer formal programs that extend over a number of weeks or even months, you may find that classes offered by graduate schools of library and information science fit the bill. MLA regularly publishes a listing of courses in health sciences librarianship offered by accredited schools of library and information science in the United States and Canada. The list is available free of charge from Professional Development Department of the Medical Library Association, Suite 3208, 919 North Michigan Avenue, Chicago, Illinois 60611, 312/266-2456.

On the other hand, day-long seminars are convenient for reviewing content, updating information, and exploring new concepts. In addition to courses offered by colleges, federal agencies, and vendors of online services, the MLA presents a series of one-day seminars directly related to the content of the General Examination. More specialized study opportunities also are available from MLA. A full catalog of these is available from the Association at the above address.

## Mentorship

Often the best learning occurs in the least formal setting. Your friends pass along information. Supervisors direct your completion of new tasks. Increasingly, you will depend on a wide network of acquaintances to keep you up-to-date and to refer you to reliable sources of information, products, and services. That is the pattern of professional life.

Through the years, many professionals have credited some one person, a *mentor*, with shaping not only their knowledge of the field, but, their values and integrity.

The MLA Mentors Program, started in 1986, builds on that spirit of professional camaraderie. MLA mentors are Association members who have already been certified and who can help you think creatively about the certification process. Your participation in the program can be the beginning of a professional network that will last throughout your career.

It is easy to participate in the Mentors Program. Simply write to: MLA Mentors, Professional Development Department, Medical Library Association, Suite 3208, 919 North Michigan Avenue, Chicago, IL 60611.

## Dealing with the Content

Now, let's think further about the knowledge bases of medical library practice. A word to the wise: do not expect to know everything on the examination. There undoubtedly will be certain questions that are beyond your particular education or experience. The construction of the test takes this into account; others will have weaknesses also.

The test is, at best, a compromise among several areas of importance to medical librarianship with a heavy emphasis on the application of what you *do* know. At first glance, the content outline (page 5 and 6) may seem overwhelming, but it will provide an overview for your review.

You may have been out of school for two or more years; the course material may not be fresh in your mind. You may have had a number of assignments as a librarian. You will need to review knowledge gained in the classroom *and* on the job. Remember, many examination questions deal with knowledge you use daily.

Begin your review well in advance of the examination. Spaced review proves more effective than last minute, "crash" efforts. Make yourself a weekly schedule. Some persons prefer studying alone; others benefit from a group. Perhaps you can form a self-help study group with other candidates. Perhaps the MLA Chapter in your area will sponsor a study group in which you could participate.

Don't overlook the MLA Mentors or the continuing education opportunities in your community. Regular contact with persons of special expertise may be the secret to your success in preparing for the examination.

Take stock of yourself before you begin your review. What did you enjoy most in school? What areas are you comfortable with? Where are the gaps in your knowledge? Where are you working? What do you do mainly? Compare your knowledge and experience with the content outline for the exam. Check your performance against the objectives for the examination. How do you measure up? The amount of preparation and study you need will vary according to what you feel confident about. Your references, collected as a part of the Portfolio of Professional Experience (see Chapter 2) and your self assessment provide a fair, honest analysis of your readiness for the examination.

A good place to start any study program might be with the *Handbook of Medical Library Practice*. Don't try to read it line by line. Do not waste energy on particular dates

*Refer to the bibliography at the end of this guide for complete citations.

and bits of information. Study major areas. Acquaint yourself more intimately with the overall profession of health sciences librarianship. Try to get a feel for the environment in which you will be working. Identify the major areas in which you wish to improve your knowledge or skill. Consider new sub specialties of the field which may help shape your career goals. Read not only for content, but also for the vocabularies in various areas. Concentrating on the special words and concepts used in different subject areas will help you to be prepared for new questions in a generalized way.

Look through your own professional library as a next step. If you live near a school of library or information science, check its library. Start first with the "core" set of references recommended earlier. Then, what new titles have appeared since your graduation? Talk with practicing librarians. What publications do they read regularly? Talk with people who have taken the Certification/Registration test. Ask them what they did to prepare for it and what the experience was like. See what suggestions, encouragement, and cautions they offer. Don't hesitate to call the Medical Library Association. The staff in Professional Development often have suggestions for study which have proven successful with candidates for Certification and Registration.

The review process in itself can strengthen your connection with the total profession and affect how you view yourself in the future. More than thinking of yourself as a single person, this is a chance to grow and develop within the framework of a profession with a valued history and record of accomplishments.

## Understanding The Question Format

It is sometimes helpful to have examples of how test questions are constructed and what they aim to do. The information in this section deals with psychometrics and test construction. If you understand more about the construction of the questions, you may be able to respond to them with greater ease.

First of all, multiple choice questions have a *stem*, followed by *options*. They may pose a question or give you directions. Some examples of stems and options follow. However, please notice that these questions do *not* deal with the content of librarianship. This is deliberate for two reasons:

1. You can focus more easily on the construction of the question without the distraction of health sciences content;

2. If you find some of the examples humorous or whimsical, you may relax and even laugh! A sense of humor may make the test go better for you.

*Example:* A *stem* that is a *question:*

*Which of the following is most nearly one year?*

(1) 364 days
(2) 12 1/2 months
(3) 53 weeks
(4) The period between finding your IRS forms in the mail

*Comment:* 1 is the best answer. None of the above choices is an exact answer; but remember, the question says "most nearly." Three hundred sixty-four days is only one day off. (The IRS may find you each January 2, but can you be sure? And what if there is a postal strike?)

In general, always select the option you believe *best* answers each question. None of the choices may be absolutely correct. None may be the best of all possible answers, but one choice is better than any other that is offered. You need to try to select the best *specific* response rather than a more general answer — the most *pertinent* in terms of what the particular stem asks. Sometimes (not in the above instance) a universal, all-encompassing answer is best. Sometimes the words "usually" or "most often" are clues in the stem that a general answer is expected. In such questions, do not waste your time and energy thinking about the exceptions.

*Example:* A *stem* that is an *incomplete statement:*

If you were lost driving on a highway miles away from any city, you would have *least* need for:

(1) A compass
(2) A zip code directory
(3) A state road map
(4) A CB radio

*Comment:* Option 2 is your best answer. Notice: if you were careless, you might have picked 3 (the state map), which is probably the *best* resource for your predicament. But the question asked for the *least* useful, and in this situation the zip code directory would get you nowhere. Always take time to read the stem with care so that you don't miss things you really know!

Beware of options that are true but do not satisfy the total requirements of the problem, are too narrow to be satisfactory answers, are common misconceptions, or are more typical of what a layperson might say than of someone who has specialized professional education. Let's illustrate some of these pitfalls further:

*Example:* There is an old saying, "You can lead a horse to water, but you can't make him drink." This would suggest which of the following as the most important message?

(1) Horses have minds of their own.
(2) Horses don't like to be led.
(3) Put salt in his food and he will want water.
(4) When dealing with others, don't force them to do what you think they should do.

*True but limited:* Although there is truth in all of the above, the most important message here is contained in 4.

*Example:* You are late for an appointment and you notice a spot on your jacket. Your best approach would be to:

(1) Take your jacket to the cleaners tomorrow
(2) Consult your "How to Clean Everything" book
(3) Change jackets
(4) Wash it out

*Most pertinent:* 3 would apply here. 1 is beside the point for today; 2 makes you late; and 4 might be downright ruinous.

*Example:* You don't sleep too well at night. Your best bet would be to:

(1) Drink a glass of wine a half-hour before retiring
(2) Try some sleeping pills
(3) Get a checkup with a physician
(4) Stop drinking coffee after five o'clock

*Too narrow or specific:* 1, 2, and 4 are all too specific. The all-purpose answer would be 3. The physician, of course, may suggest any one of the other solutions.

*Example:* John has been trying to get a job with little success for three months, ever since he finished high school. A says he could get one if he tried hard enough. B says the unemployment rate for teenagers in this city is 22%. Who is right?

(1) A only
(2) B only
(3) Both A and B
(4) Neither A nor B

*A lay person's rather than a professional's response:* The best choice here is 2. There are several ways to think about this. Option 1 represents thinking often held by the general public. It is hardly an informed response. It is blaming the victim. The poor, for example, are often blamed for their poverty. One could also select the 22% thinking because it favors a research-oriented point of view and might indicate some structural problems with the economy rather than individual deficiencies.

So far you have seen question types that have the format of a stem and four options. You should also be prepared to find some questions that will have one situation (a case vignette, a graph, or episodes over time) but will ask for several different answers related to the one stem. Some illustrations of this type of question are given below.

*Example:* Listed below are several words that are related to options A through C. Each word may be used once, more than once, or not at all.

(1) Smorgasbord
(2) Hors d'oeuvres
(3) Adios
(4) Avant-garde

Select from the list above the word described by each of the following phrases:

A. A meal with many dishes served as a buffet
B. Good-bye
C. A hodge-podge

*Answers:* A:1
B:3
C:1

*Comments:* You are dealing here with some foreign words that you may have never encountered in writing before. (1) Sound them out. (2) Try the elimination technique. (3) Take your best guess. You will find foreign language words in the MLA exam, (and you may encounter a word that is "foreign" to you) but you will not be expected to define them. Don't let this throw you! Keep your self-confidence high by reminding yourself that most of the material is familiar.

Now for another example of a question with a single situation and three different requested answers related to it.

(1) One entity is completely contained in the other, but not vice versa.

(2) Both entities share some, but not all, components.

(3) There is nothing in common between these two entities.

(4) None of the diagrams fit.

Select the diagram and statement above that most accurately describes each of the following relationships.

A. Sea sickness and home sickness
B. Tests and four option questions
C. Paper money and a candy vending machine

*Answers:* A: 2
B: 1
C: 3

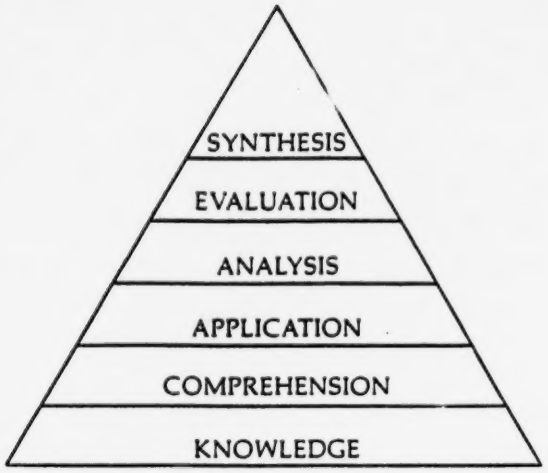
## Levels of Question Complexity

Up to this point, we have considered the general form of the questions: in most cases a stem (or situation) and four options. We now will consider *abilities* (see the content/abilities matrix on page 5). We will describe and illustrate six increasingly complex levels of abilities or "thought processes." These levels, pictured below, are considered fundamental to the practice of health sciences librarianship: knowledge, comprehension, application, analysis, evaluation, and synthesis.* By recognizing the differences between each type of question and the level of thought process it demands you will be able to think your way through these differences when you see them in the test.

The list of abilities is in the order of increasing complexity of the mental processes involved. Knowledge, the first level, involves the least complex ability. In general, mastery of the lower levels is required before a person can demonstrate competence at any of the higher levels. The model is a hierarchy. Synthesis, for example, uses abilities in the lower five levels to find the correct answer. All of these thinking processes are used by working professional medical librarians and are involved in "professional judgment." Not all levels are included in the Certification/Registration Examination. However, a general understanding of each level is important to your successful performance on the examination.

We shall now introduce each level.

*The pioneering work of Benjamin S. Bloom and colleagues in the area of educational objectives is acknowledged as influential in this classification of abilities. See Benjamin S. Bloom et al., *Taxonomy of Educational Objectives* (New York: David McKay Co., 1956).




*Knowledge*
A knowledge-type question calls for you to remember a particular something, perhaps a certain fact or definition. The emphasis in such questions is on recalling or recognizing the right answer from among the options. Here's an example:

Which of the following characters plays a key role in the TV show "Dallas"?

(1) Buddy
(2) Bobby
(3) J.B.
(4) Edith

*Comments:* 2 (Bobby) is correct.

What if you had watched "Dallas" only once in your life. What do you do? Start by eliminating those you know are *not* the answer. Edith goes with Archie and "All in the Family," so she's out. Then there's Buddy. Who's Buddy? Never heard of him. What about J.B.? Well, there is a J.R. in "Dallas," so it's not likely that there is a J.B. That leaves Bobby. Take Bobby after trying to eliminate other ones that you *did* know weren't quite right. Or:

- Just take a guess if you have eliminated some but not all options. Guessing can be useful in the test — it's better than not taking a chance! Remember, you are given credit for how many right answers you have; there are no penalties for the wrong ones.
- If you draw a blank on any question, put a little check (✔) in the margin and come back to it. Sometimes the right answer will pop into your head later. Also, your memory might be jogged by answering some of the other questions.

Here's another knowledge-type question:

If you had a headache, what would *not* be too helpful?

(1) Alka Seltzer
(2) Aspirin
(3) Lavoris
(4) Tylenol

*Comment:* 3 (Lavoris) is right. But notice: In this question you had to pick what would *not* be a right answer. This represents a different kind of thinking: In order to be right, you have to pick the *wrong* response.

Most of the time the questions that ask for *not, except, least, worst,* and so forth will be grouped together. However, because they call for a different mind set, tips that can help are:

- Read carefully
- Go slowly
- Be prepared for thinking in both directions

*Comprehension*
A comprehension-type question seeks to tap your grasp of the meaning of a question. You may need to translate one idea or description of a situation into a different form to show that you understand the sense of it. Here is such an example:

What captures the meaning of Lucy's thinking best in the cartoon below?

(1) I can see better when I lie on my back.
(2) I am not going to get enough kisses this Christmas
(3) There are too many candles in this room.
(4) When you look carefully, you see more and more.

*Comment:* The right answer is 2 (not enough kisses). You had to think about what mistletoe is associated with here. But also, remember the little word "best." If that were not there, you might get away with 4 or even 1. So, when you see such words as *first, key, greatest,* and so forth, you have two tasks in order to show you understand: make the translation and then set priorities among the possible answers to select the most appropriate one.

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Another comprehension example:

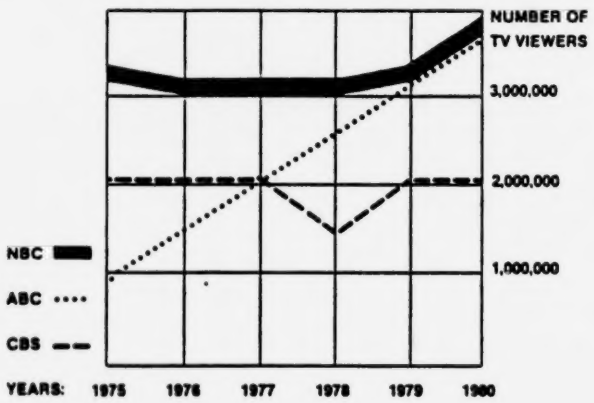
What might you conclude from this picture?

(1) Five people are going somewhere.
(2) Three women and two men are walking.
(3) It is a tango diagram from a dance studio.
(4) The footprints seem to lead mainly to one place.

*Comment:* Best answer would be 4, because all but two end up in the center of the picture. Note also that 4 is stated in the least dogmatic and specific fashion.

These examples may have helped you to see that the comprehension-type questions ask you to move from one way of expressing something to another way, as well as knowing or remembering something. Here is one further example that has a format closer to what you might expect to find on the test:

**ESTIMATES OF TELEVISION CHANNEL WATCHING**
**1975-1980**




This graph shows numbers of people watching three TV channels at breakfast during the past six years. One can correctly conclude which of the following:

(1) The number watching NBC and ABC are the same.
(2) The CBS viewing pattern is consistent.
(3) Fewer persons have watched CBS consistently than the other channels.
(4) ABC has shown the least amount of growth in viewers.

*Comment:* The most accurate answer here would be 3. Now, how should you approach a question like this? Here are a few tips:

- Don't panic over the format! Practice graph and table reading. Chances are you will find at least one of these kinds of questions on the exam. Interpreting them is a skill librarians need to have.
- If you are prepared to find such question formats on the exam, you might engage in a little mental self-talk when you see them. "I can do this" would be the kind of message that helps. You'll find that giving yourself messages of confidence will help you to stop worrying and increase your ability to think about the question.
- Study the diagram as a whole. Its purpose is to organize a lot of information conveniently and to show many possible relationships in one place. Hunt for the two main components of measurement. They will always be there to orient you to the messages being displayed. In our example these two pieces of information are (1) numbers of viewers and (2) years.
- Read each option carefully and think about what it means. In this example, 1 says the numbers watching NBC and ABC are the same, so that has to be out. You looked over the whole diagram so you know (even without reading the particulars) that the line curves are *not* the same. Option 2 appears visually as a possibility, so keep it in mind. On to 3: What about this one? It's hard to be sure, the little word "consistently" alerts you that you can't go by the curves alone, that you must find some average or mean for numbers of viewers over the six years. So you place 3 on hold along with 2 while you get rid of option 4. It is obviously wrong, the graph says the exact opposite. ABC has had the *most* growth.

You see now that you must compare answers 2 and 3 to find out which one is more accurate. To find your comparison of the consistency of viewing over the years, do some simple arithmetic (in the margin of your test booklet). You are interested in finding the means (averages) of numbers of viewers over the six-year time span for CBS, ABC, and NBC.

Take the approximate numbers for ABC's curve for each year: 1 + 1.5, and so on. Add up your column of six numbers and divide by 6. Do the same for CBS and NBC. You can now compare your three scores and see that option 3 (fewer persons have watched CBS consistently than the other channels) is the best answer. Although the CBS viewing pattern is *almost* consistent (option 2), it is not totally.

| | ABC | CBS | NBC |
|---|---|---|---|
| 75 | 1.0 | 2.0 | 3.25 |
| 76 | 1.5 | 2.0 | 3.0 |
| 77 | 2.0 | 2.0 | 3.0 |
| 78 | 2.5 | 1.5 | 3.0 |
| 79 | 3.0 | 2.0 | 3.25 |
| 80 | 3.75 | 2.0 | 3.75 |
| Totals | 13.75 | 11.5 | 19.25 |
| Divided by 6 | 6 | 6 | 6 |
| | 2.29 | 1.91 | 3.20 |

*Application:*
The application-type questions ask that you take what you know and relate this to a new problem, situation, or idea. You will have to rearrange things that you know mentally in order to select the best among several possible responses. About one-third of the test will consist of application questions, more than any other type. Some examples are given below.

Two ten-year-olds are playing in the school yard. Tom hits James when his back is turned. A few minutes later George appears and tries to hit Tom, but James keeps him from doing this. Which among the following "prescriptions" most likely directs James' behavior?

(1) Keeping up with the Joneses
(2) The Golden Rule
(3) The Third Commandment
(4) The Fifth Amendment

*Comment:* 2 is the answer (do unto others as you would have them do unto you). Note: Keeping up with the Joneses suggests doing the same as, or competing with others. Options 3 and 4 have nothing to do with the case and can probably be eliminated (even if you aren't sure of exactly what they are) simply through common-sense guessing.

Jimmy wanted to be elected president, but Ronnie won. Jimmy said afterwards that he was relieved — being president was too time-consuming a job. This is an example of:

(1) Sour grapes
(2) Magical thinking
(3) Brainwashing
(4) Southern manners

*Comments:* 1 is the best answer. But let's look more closely at 4: Southern manners. If you are a Southerner, did this make you angry? Perhaps it did — and if it did, it distracted you, at least momentarily, from considering the four options with equal rationality. You had some emotion: This test is unfair, biased, wrong, and so forth. But here's the very important point: Inevitably, despite the greatest care, there will be some words or ideas that will hit home with some persons because they mean more to them than to other persons. Try to watch out for these, and keep in mind that they are *not* deliberate. Beware of answers that generate some emotion in you. Understand your emotion and get rid of it. In your own best interests, put your feelings aside during the test.

*Analysis*
An analysis-type question emphasizes breaking down the material into its parts and seeing how the parts are related to each other and how they fit together. This example illustrates the need for analysis.

Jack and Jill went up the hill to fetch a pail of water. Jack fell down and broke his crown. Jill ran off to find a helper. Which of the following persons she returned with could be helpful?

A. A goldsmith
B. A dentist
C. A plastic surgeon

(1) A only
(2) A and B only
(3) B and C only
(4) A, B, and C

*Comment:* The correct answer is 4. Any one of these could help. Here we are thinking of three possible meanings of "crown" — coronet, top of the tooth, or one's head.

Now try this one:

It's snowing and (A) the weather report indicates it is 20 degrees outside. (B) You go out to your car and scrape the ice off the windows. The door is hard to open but you get it unlocked by putting some hot water on the lock. (C) Now you try to start the motor. You push down the gas pedal several times while turning on the ignition, but it makes a grinding sound and still doesn't start. (D) After turning the ignition off and on, you notice it sounds strange, so you wait a few minutes before trying again. Which among the four statements is most likely to have caused your problem?

(1) A
(2) B
(3) C
(4) D

*Comment:* Probably 3. You have flooded the engine with too much gas. Note: Although some persons might select 1, the cold weather, we would have to assume that you have prepared for cold weather and have antifreeze in the car; also, 20 degrees is not too cold for most cars, most of the time. At any rate, this question illustrates that when you have two possibly correct answers, you should take your time and try to select the most inclusive one. Try not to read too much into a question, for example, maybe it's really out of gas; maybe it's an old car. (This question may put at a disadvantage persons who have lived only in "sun belt" states — and those who don't drive cars.)

*Evaluation*
Evaluation-type questions demand using two or more kinds of knowledge to select the correct answer. In other words, you must satisfy two (or more) criteria at the same time.

Assuming you have three days to get from New York City to Phoenix, what is most likely to be your cheapest way to get there?

(1) Hitchhike
(2) Bicycle
(3) Bus
(4) Airplane

*Comment:* 3 best satisfies both criteria (speed and cost.) Hitchhiking probably is the cheapest way; however, it is too uncertain in terms of time. Here is an instance of taking the *usual* rather than the possible. A tip: play it safe in selecting your answers. Think of the probable and try not to waste your time thinking about the exceptional. Some persons miss questions on objective tests because they know too much! They know particulars that might make all options "wrong" — they read the unusual into the question (information beyond the

test makers' intent). Try to recognize the places where your "extra" knowledge may do you in.

*Synthesis:* Synthesis questions ask you to combine parts to make a whole or to make a pattern not clearly seen before. These questions involve all the thinking abilities we have discussed so far — knowing and understanding, applying the understanding to a new situation, analyzing and comparing the various parts to see their relationships, evaluating and finally putting all the pieces together again — in others words, synthesizing!

Synthesis questions are the most demanding of all the types. The MLA exam contains fewer of these than any others, but be prepared to find a few of them. Take your time with them; don't jump to an impulsive conclusion. Try to go through all the mental steps as you come to your answer.

Washington is to one as Lincoln is to five. Which of the statements listed below *best* describes this statement?

(1) It is an analogy.
(2) It is a comparison between cities.
(3) It is a reference to presidential history.
(4) It is a currency analogy.

*Comment:* The *best* answer is 4, even though 1 is also correct. Once you think of U.S. currency, you can see that one-dollar bills have Washington on them and five-dollar bills have Lincoln on them — and both are currency. Answer 1, an analogy, defines the type of statement but is a more general answer than 4, which speaks to this particular question. So, remember the little word *best* and proceed cautiously. *Best, key, first, primary,* and other such words will always alert you to compare possibly *right* answers and then pick out the most exact one.

# Chapter 6:
# For More Practice, a Mini-Mini Exam

## Where You Are Now

So far we have looked at some of the complexities involved in

1. the content areas of the examination,
2. the way the questions are posed, and
3. the increasingly complex levels of reasoning ability that the question types demand.

Let's apply this information to the first practice exam you took (pages 9 through 11).

Look back at your answers. Chances are you were concerned only with whether they were right or wrong. There are two things you can do now that will improve your ability with such questions.

### Thought Exercise 1

Study the 20 questions again; read each and see if you can determine what the problem was with the ones you answered incorrectly. (This will take you some time, but the results are worth it.)

### Thought Exercise 2

Try to determine the ability level of each question to see if you understand the different reasoning processes involved. Take each question in turn and try to decide its level. This is difficult; don't be discouraged if you don't get them all. Learning to recognize the thinking demand of the question will help you in the examination. After you have tried this, turn to the end of this chapter for the answers.

## Putting It All Together

You are now ready for the mini-mini exam. It includes six questions with content from medical librarianship presented in terms of increasing complexity. Try to think through your answers before referring to the comments.

*Knowledge:* remembering ideas, materials, rules

*Example:* You have been asked to purchase a book called *Physicians and Social Medicine* for your library. The person making the request doesn't know the publisher, but thinks the work was published in 1984. Before ordering this book, you would like to verify the price and the publisher. Which of the following is *not* an appropriate source for verifying this information?

1. *Books in Print*
2. *Cumulative Book Index*
3. *Medical Books and Serials in Print*
4. *Forthcoming Books*

*Comment:* Here the answer is 4. *Books in Print* would be an appropriate source, since it provides a listing of titles currently in print. Each entry includes full bibliographic verification such as author, title, edition, publisher, place and date of publication, and price. *Cumulative Book Index* provides a list of books that can currently be purchased from publishers. *Medical Books and Serials in Print* provides a listing of titles currently in print. Both include full bibliographic verification information. Both are appropriate. Only *Forthcoming Books* is not an appropriate source since it includes titles that have not yet been published. There is your correct answer. Now, of course, you may have remembered this from your basic course in health sciences bibiliography, but you could reach the same conclusion by a process of elimination, drawing upon what you DO remember to deduce the right answer.

*Comprehension:* understanding the meaning

*Example:* "One aspect of decision-making by patients, namely decisions that give permission for diagnostic or treatment interventions." For which of the following is this definition most appropriate?

1. Invasive procedures
2. Ethical dilemma
3. Medical paternalism
4. Informed consent
5. Fiduciary responsibility

*Comment:* Your answer should be 4. Here the task is that of understanding the meaning of a definition presented in terms which you may not have seen before. Clues to the meaning may be found in "decision-making," "patients," and "permission." Or, you may be well-acquainted with ethical dimensions of the health care environment and immediately recognized the terms presented as options more or less appropriate to the definition. Using logic might have been helpful in narrowing the choice. Option 5 would likely be eliminated because it deals with another kind of decision, that of finance or payment of bills. Options 2 and 3 are unsatisfactory, although related, because they require definitions far broader than the one given. "Informed consent" is often considered when debating "medical paternalism," and certainly may figure in a discussion of ethical dilemmas of health care providers. The definition given fits option 4 perfectly; no other option is suitable.

*Application:* combining what you know to deal with a problem of situation

*Example:* You are cataloging the book titled *Relative Costs of Home Care and Hospital Care in Australia.* You note the following entries in the *Annotated Alphabetic MeSH:*

COST ALLOCATION
N3.219.151.80
NIM: only legis (methods (trends; cost shifting goes here (79)
see under COSTS AND COST ANALYSIS
X COST APPORTIONMENT
X COST SHIFTING
COST APPORTIONMENT see COST ALLOCATION
N3.219.151.80

COSTS AND COST ANALYSIS

N3 21° 131 •
NIM only: legis. methods, trends, cost shifting; index under COST ALLOCATIONS OF COSTS
••
NL COST ALLOCATION
NL DIRECT SERVICE COSTS

ECONOMICS, HOSPITAL

N3 21° 202
GEN or unspecified only; prefer econ with specific hosp subject. Manual 1° 4 0° only: hist, trends; consider also HOSPITAL PURCHASING CATALOG; geog form
N HOSPITAL ECONOMICS

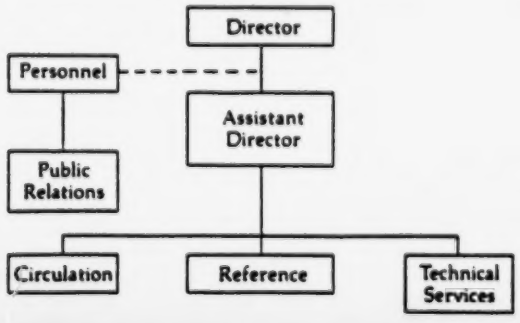
According to NLM's cataloging practices and policies, the correct subject heading is?

1. Cost Allocation
2. Cost Allocation — trends
3. Costs and costs analysis — Australia
4. Hospital Economics — Australia
5. Economics, Hospital — Australia

*Comment:* The item requires you to apply a basic set of rules in interpreting an entry. Each of the statements presented is incorrect with the exception of option 5. Why? Option 1 is a minor descriptor and is not used for cataloging according to NLM practice. Option 2 is also incorrect. The use of the subheading "trends" is permitted with the main-heading "Cost Allocation" for indexing purposes. But since the main heading is a minor descriptor, neither the main heading nor the mainheading-subheading combination are permitted for cataloging. The main heading "Cost and Cost Analysis" (option 3) is a major descriptor and, therefore, permitted for cataloging. However, the cataloging annotation for geographic subdivision is not present in the MeSH entry, so the subheading "Australia" is not permitted with this main heading. Therefore, the use of this main heading-subheading combination is incorrect. Option 4, "Hospital Economics," is not a major or a minor desciptor. It is an entry term, which is a "see" cross reference to a single MeSH heading. The use of an entry term with or without subheadings is incorrect. In option 5 we find the correct answer. "Economics, Hospital" is a major descriptor, making it an appropriate heading for cataloging. The cataloging annotation for geographic subdivision is also present in the MeSH entry, making the use of the subheading "Australia" with this main heading correct.

*Analysis:* extracting components and understanding their interrelationships

The structure of a medical school library is shown in the organizational chart below. Which one of the statements describing the structure is correct?




1. The assistant director is responsible for the day-to-day supervision of the three operating units and the personnel office.
2. The director is responsible for overall planning and for direct supervision of the personnel office.
3. The personnel office serves in an advisory capacity to the director.
4. The personnel office has line authority within the medical school library.
5. The personnel office has authority over the assistant director.

*Comment:* Option 3 is the answer. You could come to this by seeing that it is the only answer which the organizational chart fits without any confusion. Option 4 was quickly eliminated — line authority within the medical school library — as was option 5 — personnel authority over the assistant director. If the chart is a graphic display of relationships within the organization, neither of these options would make any sense at all. The assistant director is clearly connected with circulation, reference, and technical services, but not with personnel or public relations, so option 1 cannot be an accurate analysis of the structure presented. Option 2 could present some problems if you were to assume that the chart represented the entire institution. But read carefully. This is a library within the medical school. If the personnel office serves the entire school, then we understand that it aids the library director, but is under the direction not of the director, but another administrator in the school. The chart is a code which you must decipher (analyze) in order to know its meeting.

*Evaluation:* judging among various ideas, methods, and options as to the most valuable

*Example:* The library director has requested projected budget figures for next year's book budget. You, the technical services librarian, have cumulated financial and statistical data from your own library. In addition, you need reliable price indexes for health sciences monographs to support your projections on publishing and economic trends. The best printed source for this information is:

1. *Bookman's Price Index*
2. *Bowker Annual of Library and Book Trade Information*
3. *Bulletin of the Medical Library Association*
4. *Medical Books and Serials in Print*
5. *Publishers' Trade List Annual*

*Comment:* The correct answer is option 2. Let's see why. *Bookman's Price Index* provides information for *HISTORICAL* books on a title by title basis. Entries are compiled from bookdealers' catalogs. It does not supply price indexes for *CURRENT* publications. *Medical Books and Serials in Print* (option 4) provides price information for *CURRENT* materials on a title by title basis, but it does not provide any comparison of prices or publishing trends. Two down for obvious reasons. Now the *Bulletin of the Medical Library Association* (option 3). Two acquisitions aids are published in the *Bulletin: Selected List of Books and Journals for the Small Medical Library*, and *Selected List of Books and Journals in Allied Health Sciences*, compiled by Brandon and Hill. Published in alternate years, they are core lists of books and journals. They only list recommended titles. Neither includes price indexes or support

projections on trends in publishing and economics. Option 5 is a collection of publisher's catalogs. The catalogs are not compiled according to a single system, the amount of information given about books varies considerably, and not all publishers choose to be included. Only option 2, the *Bowker Annual of Library and Book Trade Information*, includes a survey of subscription prices of American periodicals, divides the data into categories by subject, and compares subscription costs over a period of several years. It also provides information on the number of books published in different subject areas and the average price per book compared over a period of three years.

*Synthesis:* combining parts to make a new pattern or whole

*Example:* You are the librarian in a small hospital. Your library has very limited space, so you must remove certain journal issues from the shelves in order to have space for shelving current issues. After a preliminary analysis, you have identified the following candidates on the grid below for removal to storage. All of the titles are used to some extent, but the library committee has authorized you to select from this group for storage.

*Comment:* The task of synthesis most often finds expression in the production of a unique product or performance: a learned paper, a lecture, or a blueprint, for example. At other times, it is a plan for action, such as a grant proposal. In this question, you are asked to link related concepts in reaching a conclusion (the answer is option 4), the result of which is unique since the elements which are considered may change from situation to situation. The item is an incomplete or partial assessment of the ability to synthesize information for a specific purpose. Of course, in the workplace, this activity would result in a report or recommendation. Here we have only a sample of the reasoning necessary for professional-level performance.

| Title | Holdings | Indexes owned in which title is indexed | Years for storage |
|---|---|---|---|
| A. *American Journal of Nursing* | 1977-present | *IM. CINAHL* | 1977-79 |
| B. *Circulation* | 1973-77 | *IM* | (all) |
| C. *Diabetes* | 1974-present | *IM* | 1974-78 |
| D. *Medical World News* | 1975-present | *(none)* | 1975-79 |
| E. *Science* | scattered issues | *IM* | (all) |

Which one of the following combinations would be the *most* appropriate to remove?

1. A, B, C
2. A, B, D
3. B, C, E
4. B, D, E
5. C, D, E

## Mini Examination Question Levels

Question levels for the mini examination questions appearing on pages 9 through 11 (K=Knowledge; C=Comprehension; Ap=Application; An=Analysis, E=Evaluation, S=Synthesis)

1. An
2. Ap
3. K
4. E
5. An
6. E
7. Ap
8. An
9. K
10. K
11. K
12. Ap
13. Ap
14. K
15. Ap
16. K
17. K
18. C
19. C
20. An

# Chapter 7:
# Test-Taking Strategies

Knowing and using certain strategies of test-taking may help you show more of what you really know when under pressure. Like any skill, once these kinds of actions are identified and described, they may be practiced and mastered. You can learn how to take a test more successfully if you think about and practice certain behavior. Test-taking skills, like other kinds of skills, have a knowledge and action component. In our case, there is a certain amount of knowledge about the test and what to expect about it that will help you.

It is well known that knowledge enhances functioning. By identifying the knowledge (or strategies) of taking written tests, we hope to demystify this experience. These strategies, or learning to "keep your cool," are as important as knowing the content. They may even be *most* important, as some research seems to indicate!

In this chapter we will identify as many of these strategies as we can. First, we will summarize what we pointed out in the previous chapters as a review. This material will be separated into two parts: (1) information about the test, and (2) how to act during testing. We will then go on to present more such tips gleaned from the experience of helping others get ready for tests.

## About the Examination

Prepare yourself for the areas you know least about. You don't need to devour whole textbooks on new subjects.

Do not expect to know everything. If you are familiar with the vocabularies of various areas of content, you may understand new questions more easily. You will not be expected to have in-depth knowledge of various schools of thought or orientations, but you must be able to recognize key aspects.

Some questions are posed positively (what is best, what to do); some are posed negatively (what is least, what to avoid). Practice thinking in both directions.

There are different levels of complexity in the form of the questions. Try to recognize the various types of questions: practice thinking through the types mentally and be aware of the thought processes involved.

There will probably be tables or graphs. Learn how to understand what they convey and how they are organized.

## During the Examination

Be aware of the time and how you are using it. A good plan is to go through the test three times. On the first reading, you get an overview and answer the questions you feel confident about (making a check in the margin for those you will return to). On the second reading, return to the difficult questions, reason them out, and as a last resort, guess. On the third run-through, see if you have answered *every* question, erase any unintended marks on the answer sheet, and give the entire test one final review.

Take your time and do not jump to impulsive conclusions. Read carefully. Go slowly.

Among the options, go for the nearest, the best; the most pertinent, the most inclusive, the most specific answer to the stem. Try to avoid the true-but-partial, the too-limited, the common misconception, the lay response, the dogmatic.

Play it safe. Select the usual or typical rather than the possible. Don't be too suspicious. Don't add inferences of your own to the question. Try to stick closely to what is there.

Do not be distracted by words that affect you emotionally. They are accidental rather than purposeful.

Words such as first, key, greatest, and so forth suggest that you must compare and then select a priority. If two options seem comparable, try to decide which one is inclusive of the other. Select the more inclusive (unless the stem asks for the most *specific* response).

As you read through the questions, check the ones you are less sure of so that you can return to them later. Eliminate the options that you know are wrong. Making your best guess after using logic rather than leaving any question unanswered will work in your favor. There is enough time in the test. When you have finished, look back at the questions you left blank. *And guess!* You are not penalized for wrong answers.

If you miss a few questions (or resort to guessing), don't "lose your cool." You only need to pass, not to be perfect!

## Further Test-Taking Strategies

Read the stem carefully to be sure you understand it completely before trying to select the best answer. Plan to spend as much or more time studying the stem as you will spend on the options. Sometimes understanding a single word (primary or secondary, for example) may make the difference. Avoid being sloppy and underestimating any question by rushing through it. Don't jot down the first answer that comes to mind. Sometimes an almost correct answer may be attractive to you. Taking time and checking and rechecking meanings may be helpful in such instances.

Practice thinking through questions. Work at understanding the intellectual skills demanded in each question rather than focusing only on the right or wrong answer. Remember, you are practicing your intellectual skills, and a skill will improve with practice . . . so, practice, practice, practice!

You may even practice making up a few of your own questions as a way of thinking about question types. Join a study group. Ask your chapter to start one, or start a self-help group yourself if you know a number of people who are planning to take the exam.

All of this leads us to the following area of great impor-

tance: your mental attitude, your confidence. Watch your attitude. Even if you haven't studied as much as you wished, don't give up in despair. Resolve to do your best. You have control over your frame of mind. Being uptight and anxious can do you in. You could let yourself be so nervous that you can't think, or use what you know. This is not a pep talk! Rather, it is very technical information that is the object of considerable study and research currently: *test anxiety: test-taking skills.*

Chances are you do not suffer from what has been called test anxiety. After all, you did make it through several years of post-secondary education and so have passed tests before. More probably, you are concerned about not taking tests *recently.* In case you *do* think you have an inordinate amount of fear that stops your thinking during tests, you might want to get some counseling help. Perhaps there are anxiety or stress groups meeting in your city, or you might find a self-help book on stress management useful. If your fears are keeping you from taking the exam, explore outside resources and get specialized help if necessary.

If your worries are simply related to fear of an unknown examination, perhaps the material presented so far has helped you. Perhaps the tips that you have learned (for example, concentrate on only one test item at a time, or mark the harder items to return to later) will be sufficient.

Two more general kinds of information may help with average test-taking fears: *self-instruction*[1] and *relaxation*[2]. Self-instruction is a cognitive-behavior strategy, and ralaxation training is an affective or emotion-targeted strategy to deal with test-taking.

You may wish to seek special training opportunities in these areas.

## The Testing Situation

You will have four hours for the General Examination and another two for the Area of Concentration Exam, far more than you will need. This should further encourage you to proceed cautiously and slowly.

Do not cram the night before the test. It is much better to get a good night's sleep so that you will feel alert and physically fit for the day of the test.

Come twenty minutes early. Plan your parking if this is a possible problem. You must be there on time.

Come with your identification and admission letter, two #2 (soft lead) pencils, an eraser, and a wristwatch. Bring no notes, books . . . or visitors.

Don't be alarmed if you are anxious. A certain amount of nervousness may key you up to do well. Just expect that you will be tense at the outset and try to settle into the situation.

Listen to the test instructions carefully. Proctors have received specific instructions which must be followed.

Don't plan to leave the room during the test unless absolutely necessary.

Mark only one answer to each question. Be sure your mark is in the right space and in the row numbered the same as the question you are answering. Carelessness here will make you as wrong as not knowing. Make your marks dark and fill the whole space. Remember to erase all unintentional marks carefully.

Rest pauses are helpful for some persons. This is not a first-finished event; there are no points for finishing first.

Read the directions with care. Pace yourself. Where are you at the end of one hour? Do not waste time pondering individual questions you find hard or unfamiliar. No question carries greater weight than any other. When you are through, look over your answer sheet. Don't lose credit because of careless errors or omissions.

[1]For further information, see Donald Meichenbaum. *Cognitive Behavior Modification: An Integrative Approach* (New York: Plenum, 1977); and K.E. Rudestam. *Methods of Self-Change* (Belmont, Calif.: Wadsworth Publishing Co., 1980). For other examples of self-talk, see also Meichenbaum and Myle Genest, "Cognitive Behavior Modification: An Integration of Cognitive and Behavioral Methods," in Frederick H. Kanter and Arnold P. Goldstein, eds., *Helping People Change* (New York: Pergamon Press, 1980). pp. 392-93, 413.

[2]Herbert Benson, *The Relaxation Response* (New York: William Morrow, 1975), pp. 114-15. See also Richard B. Stuart, ed., *Behavioral Self-Management* (New York: Brunner, Mazel, 1977).

# Chapter: 8
# After the Exam

In order to become Certified or Registered you must pass both the General and the Area of Concentration Examinations. Your score will be based on the number of questions you answer correctly; you will not be penalized for answering a question incorrectly. The minimum passing level (MPL) required to pass the examination is established prior to the administration of the examination; the exam is not graded "on the curve." So, theoretically, all examinees could pass the examination if they achieve the minimum passing score.

Your examination answer sheet will be scored by computer at the University of Illinois at Chicago. Computer scoring assures speed, consistency, and accuracy. The computer analysis that accompanies the scoring also allows the Certification Committee and the Editorial Panel to study the "performance" of each question on the examination before accepting the final score report. For example, if an unusual number of examinees miss a certain question, or if a large percentage of those examinees who otherwise did very well on the exam miss a certain question, the item will be reviewed very carefully by the Committee, the Editorial Panel, and the Professional Development staff. If everyone agrees that the question was ambiguous, out of date, too advanced for the stated objectives of the examination, or otherwise inappropriate, the question will be omitted from the scoring. If a question is omitted from the scoring after the administration of the examination, everyone will receive credit for it. You will not lose any points if one of the questions you answered correctly was later omitted from the scoring.

After the examination has been scored, your results will be sent to you from the MLA Headquarters. Your test score is confidential. Although general statistical information on the examination is made available, individual test scores are never released.

Your will receive your results within eight weeks of the examination. The Medical Library Association will send you a letter, telling you whether you have passed or failed, and will include a computer printout of your scores. The printout will give your score for the entire examination, and then will indicate the number of questions correctly answered for different knowledge objectives.

If you earned a passing score, you will be placed on the national roster of Certified and Registered medical librarians and will receive your certificate of Certification or Registration. Your employer will be notified of your successful completion of the Certification/Registration process and, if you are a member of MLA, you will be noted as Certified or Registered in the annual *Directory of the Medical Library Association*.

If you did not do well on the examination, the printout will help you identify the areas which you will want to study for the next examination. You may wish to ask your mentor, your references, or the Headquarters staff for advice on preparing for a re-examination. You will be eligible to take the examination at the next scheduled time for a reduced fee.

# Chapter 9:
# . . . and in Conclusion

So here we are! If you have read this guide carefully, you have some ideas about MLA, the Certification Committee, Certification and Registration as a standard for professional practice in health sciences librarianship, and the meaning of competence. You know something about the type of test used in the assessment process — its content areas and the kinds of reasoning skills you should use. You have had some experience with question-answering and with thinking your way through questions you may have missed. And you have been introduced to some of the ground rules for this exam as well as to various test-taking strategies applicable to preparing for any test and to dealing with any standardized multiple-choice test.

The next moves are yours. It would benefit medical librarianship if every practicing librarian in a health sciences setting, with two years post-graduate work experience, participated in the Certification/Registration process and passed the written examination. This would go far in assuring employers and library users that they are served by information professionals who have demonstrated a grasp of the knowledge and skill requirements the profession upholds.

Remember, there is no quota on the allowable number of Certified or Registered medical librarians. There is only a standard that they be well-equipped, competent, functional practitioners whose first interest is service to the users of biomedical information.

We leave you now by posing a few questions to conclude your study of this material.

1. Which of the following statements is *not* useful in dealing with the MLA Certification/Registration examination?

   A. Actively reason through the questions.
   B. Control irrelevant free associations.
   C. Read each word of the question carefully.
   D. Leave answers you aren't sure of blank.

   1. A only
   2. A, B, and D only
   3. D only
   4. A, B, and C only

2. Sometimes two options look possibly right. Which among the following approaches will *most* likely help you?

   A. Study the two options to find what makes them different.
   B. If one option encompasses the other, select the more encompassing.
   C. Select the more specific or pertinent in terms of the stem.

   1. C only
   2. B only
   3. A and B only
   4. A, B, and C

3. Listed below are several pitfalls that cause test-takers to do more poorly. Select the statement that does *not* fit this list.

   A. Misreading directions and questions.
   B. Guessing when one is not sure of the answer.
   C. Having a negative mind-set about testing.
   D. Being unable to detect subtleties.

4. Which of the following approaches to test preparation did this guide *not* suggest?

   A. Cramming a day or two before the test.
   B. Following your impulses or first impressions.
   C. Completing each question in serial order.

   1. A only
   2. A and B only
   3. B and C only
   4. A, B, and C

5. Success in facing and mastering an examination process is a complex matter involving:

   A. Knowledge of the content being tested.
   B. Understanding the structure, purpose, and rules of the examination.
   C. Being rigorous and self-composed during the examination.
   D. Giving yourself positive messages throughout.

   1. All of the above
   2. A and B only
   3. A, B, and C only
   4. B and C only

*Answers:* Were they easy and obvious by this time?

Question 1. 3
2. 4
3. 2
4. 4
5. 1

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# Code for the Certification of Health Sciences Librarians

Medical Library Association, Inc.
Effective January 1, 1978
Revised September 1981

To insure minimum levels of competence through the establishment of requirements for education and experience, the Medical Library Association hereby presents a Code for the Certification of Health Sciences Librarians.

1. In accordance with the provisions of Article IX of the Bylaws of the Association, the Association will grant certification to duly qualified persons under the conditions stated below.

2. Certification will be granted under the following conditions:

   (a) Graduation from a library school program accredited by the American Library Association (see Definitions)

   AND

   (b) A passing grade on an examination (assessing the entry level competencies required by health sciences librarians); this examination to be administered by the Association

   AND

   (c) Two years (or the equivalent) of post-library degree experience as a health sciences librarian at the professional level within the previous ten years (see Definitions).

   Provisional certification valid for a maximum of five years may be obtained by meeting the requirements in (a) and (b). This period will begin with the date of the successful completion of the examination requirement.

3. Recertification of Health Sciences Librarians will be required every five years to ensure continuing competence. Recertification will require satisfactory completion of

   (a) Continuing education activities and/or formal education courses approved by MLA (see Definitions)

   OR

   (b) The current certification examination.

   There shall be a Recertification Committee appointed by the Board of Directors to determine the amount and types of CE courses, formal education courses or other activities required for recertification, and approve activities under 3(a).

4. There shall be an Appeals Panel appointed by the Board of Directors to decide on questions of certification and recertification which are not clearly covered by the Code for the Certification of Health Sciences Librarians or where candidates for certification or recertification question interpretations made by the certifying committees.

5. Individuals holding foreign degrees or with unusual backgrounds may apply to the Association for consideration of their credentials in terms of equivalencies (see Definitions).

6. Certification granted by the Association shall not confer or purport to confer upon any person any degree, legal qualification, privilege, or license, nor purport to be issued by or in pursuance of or by virtue of any statutory or governmental sanction. Recipients of certification shall not by virtue thereof become members of the Association nor shall they be entitled by virtue thereof to vote on any matters whatsoever.

7. Each applicant for certification shall be required to sign a pledge absolving the Association, and its members, examiners, officers and agents from any damage or complaint by reason of any action they, or any of them, may take in connection with this application, any examination, the grade or grades given with respect to any examination, and/or the failure of said Association to issue a certificate.

8. Any certificate may be revoked at any time, for cause, by order of the Association. A hearing shall be granted on request of the person whose certificate is in question.

9. A fee shall be paid to the Medical Library Association for each certificate issued by the Association.

10. Individuals certified prior to January 1, 1978 are automatically certified under this Code and are subject to the recertification requirements of the Code.

## Definitions

1. Library schools program must have been accredited by the ALA for the year of graduation.

2. "Two years of post-library degree experience as health sciences librarian": professional level work totaling 22 months of full-time work.

3. "Continuing education activities": Association-sponsored and other short courses, workshops, seminars, institutes, and individual accomplishments in areas contributing to the effectiveness of the health sciences librarian taken for credit.

4. "Formal education courses": university or college level courses in areas contributing to the effectiveness of the health sciences librarian taken for credit.

5. "Foreign degrees": those granted outside the United States and Canada and accepted as equivalent by the ALA/SCOLE/International Library Education Subcommittee.

6. Unusual backgrounds include, but are not limited to:

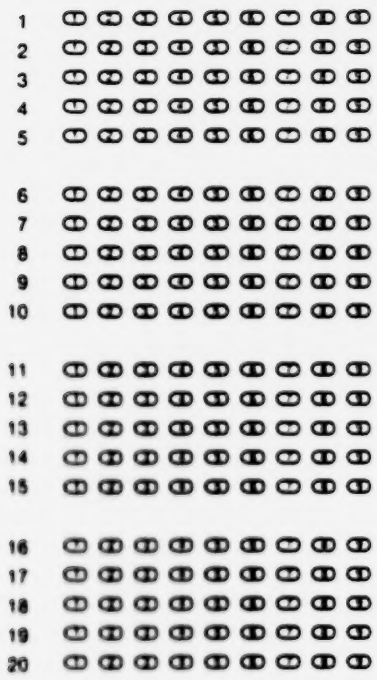
   (a) Training beyond the master's degree (6th year certificate or Ph.D.)

   (b) Demonstrated leadership in professional activities.

   (c) Substantive publications relating to the library profession.

This Code was adopted by the membership September 20, 1974 and revised in 1981.

# Answer Sheet for Mini-Examination (Chapter 4)

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